

# ABSTRACT

A device for processing multi-up panels includes a bad mark scanner for reading a surface of a multi-up panel and a processor receiving at least one input from the scanner for determining a bad mark on the multi-up panel. Also provided is circuit panel manufacturing assembly line having a circuit panel bad mark scanner, a panel component placement machine separate from the scanner, and a panel conveyor located at least between the circuit panel scanner and the panel component placement machine for conveying the panels. Further provided is a method for determining bad marks on multi-up panels comprising the steps of scanning a multi-up panel with a scanner so as to form scan data and determining a bad mark on the multi-up panel as a function of the scan data.